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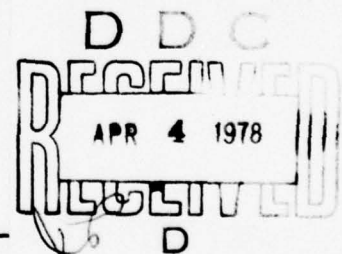


## PROGRAM MANAGEMENT COURSE INDIVIDUAL STUDY PROGRAM

THE AFCMD SUBCONTRACT MANAGEMENT FUNCTION  
OR  
WHAT AN AFPRO SUBCONTRACT MANAGEMENT FUNCTION  
CAN DO FOR THE PROGRAM MANAGER

Study Project Report  
PMC 77-2

Roger S. Alexander  
Major USAF



FORT BELVOIR, VIRGINIA 22060

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# DEFENSE SYSTEMS MANAGEMENT COLLEGE

**STUDY TITLE:** THE AFCMD SUBCONTRACT MANAGEMENT FUNCTION OR WHAT AN AFPRO SUBCONTRACT MANAGEMENT FUNCTION CAN DO FOR THE PROGRAM MANAGER

## STUDY PROJECT GOALS:

1. To provide a summary document that can be used by program management personnel in planning for and effecting the subcontract management aspects of their program.
2. To provide a summary document that other services and agencies can utilize to better understand what the Air Force is doing about Subcontract Management at the contract administration level.

## STUDY REPORT ABSTRACT:

The purpose of the study project was to examine an approach to subcontract management being utilized by the Air Force Contract Management Division (AFCMD) from the perspective of what that approach could do for the buying agencies.

The report initially reviews the events that led to the establishment of the Subcontract Management (SM) function within AFCMD. It examines its organization at Air Force Plant Representative Office (AFPRO) level and then explores the responsibilities of the SM function. The major responsibilities covered are the evaluation of the contractor's procurement system using the AFCMD Contractor Management System Evaluation Program (CMSEP) and tasks performed in direct support of the buying agency. The report then reviews the future outlook and concludes with recommendations on how the buying agencies can take advantage of the SM services.

**SUBJECT DESCRIPTORS:** Subcontract Management  
Contract Management  
Procurement Management  
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ROGER S. ALEXANDER, MAJOR, USAF

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THE AFCMD SUBCONTRACT MANAGEMENT FUNCTION  
OR  
WHAT AN AFPRO SUBCONTRACT MANAGEMENT FUNCTION  
CAN DO FOR THE PROGRAM MANAGER

Individual Study Program  
Study Project Report  
Prepared as a Formal Report

Defense Systems Management College

Program Management Course

Class 77-2

by

Roger S. Alexander  
Major                      USAF

November 1977

Study Project Advisor  
Major E. Clare      USAF

This study project report represents the views, conclusions and recommendations of the author and does not necessarily reflect the official opinion of the Defense Systems Management College or the Department of Defense.

### EXECUTIVE SUMMARY

In the early 1970s several studies pointed out the need for increased involvement by the government in subcontract management. Prime contractors were subcontracting out over 50% of the program dollars, and yet, were not paying sufficient management attention to the acquisition of the materiel being bought by those dollars.

The Air Force Contract Management Division (AFCMD) responded to the challenge by creating a Subcontract Management function within each of the Air Force Plant Representative Offices (AFPROs). The Subcontract Management function employs specialists from the various functional disciplines to continuously evaluate and encourage improvement in the contractor's procurement system. The functional specialists also provide direct support to the buying agencies by performing specific tasks throughout the procurement life cycle.

AFCMD has found that this approach is paying dividends and is moving to strengthen it. Buying agencies are encouraged to make use of the subcontract management services that are available within the AFPROs.

### ACKNOWLEDGEMENTS

I would like to express special appreciation to Mr Bernie Hebl and Lt Col John Strange of the Directorate of Subcontract Management, Air Force Contract Management Division, for the assistance they provided to me in the gathering of data necessary to complete this study. I would also like to thank my wife, Jan, and children, Nick and Jill, for their patience and understanding.

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## SECTION I

### INTRODUCTION

#### The Challenge

The process of developing and manufacturing today's complex weapon systems requires a wide variety of skills, knowledges and experiences to create the multitude of elements that constitute a defense system. It is virtually impossible for one organization to maintain the necessary expertise to accomplish the wide variety of tasks that are required to field a weapon system. Consequently, when a firm contracts with the government for the development and manufacture of a weapon system, that organization must, of necessity, subcontract with other firms in order to obtain all of the services necessary to complete the program.

The magnitude of subcontracting that occurs is substantial. It is estimated that 50% of every dollar paid to DOD prime contractors is paid out to subcontractors. (1:4)\* There are other estimates that place the amount of prime contract dollars flowing to subcontractors in a range from 50% to 70%, depending upon the type of end item, i.e, aircraft, missile, jet engine, etc.

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\*This notation will be used throughout the report for sources of quotations and references. The first number is the source listed in the reference listing. The second number is the page in the reference.

An examination of the items for which those dollars are being spent reveals a considerable portion going for major and critical components; i.e., items that are critical to the mission performance of the weapon system being procured. For example, in one communications satellite program the power source and traveling wave tubes were obtained from subcontractors; two items that were critical to the success of the mission.

If this activity is viewed from the vantage point of the Program Manager, what is seen is that over half of the dollars that have been paid to the prime contractor are going to subcontractors, along with a good portion of the risk associated with the program's success. What is also seen is that the Program Manager has lost direct control of these dollars and risks. This loss of control exists because there is no privity of contract between the government and the subcontractor. The contractual relationship exists between the prime contractor and the subcontractor. Thus, the Program Manager is forced to depend on the prime contractor to satisfactorily manage the dollars and risks for him. The burden of this responsibility falls on the prime contractor's material acquisition or procurement system.

When a program runs into difficulties, quite often the problems can be traced to a subcontracted component or item:

"Many of the unforeseen problems, schedule slippages, and cost overruns occurring during the acquisition process are the result of a lack of adequate and timely subcontract management by the prime." (2:1)

DOD has recognized for years that the best means of precluding the problems that result from subcontracted items is to insure that the prime contractor has a procurement system that can perform the proper management of subcontractors and vendors. Various approaches have been utilized in the past in an attempt to improve the prime contractor's management of subcontractors. These approaches have resulted in moderate improvements in certain aspects of the prime contractor's procurement system, but they have failed to address the problem in its entirety. The Air Force Contract Management Division (AFCMD) of the Air Force Systems Command (AFSC) has developed a unique approach to remedying this problem. This approach is paying off in terms of improved prime contractor management of subcontractors.

#### Purpose of the Study

The purpose of this report is to review the approach that AFCMD is employing to induce the prime contractor to improve his procurement system. One objective is to familiarize Program Management personnel with the AFCMD approach so that they become aware of the services that are available to them. The other objective is to familiarize other Contract Management personnel with the AFCMD approach; the thought being that others may be able to utilize the approach, or certain facets of it, to address their own subcontract management problems.

#### Study Organization

In order to present the AFCMD approach I will first discuss the evolution of the AFCMD Subcontract Management function. I will then explain



the way that AFCMD is organized to meet the challenge, and subsequently, discuss the responsibilities of that organization. This will be followed by a review of a few of the results that have been achieved, and the paper will culminate with suggestions on how the Program Manager can better take advantage of the services that are available to him.

## SECTION II

### EVOLUTION

#### Why Look at the Past

This section will address the evolution of the AFCMD Subcontract Management function. In order to understand the uniqueness of the AFCMD approach to encouraging satisfactory subcontract management by prime contractors, there must be a contrast made with the previous approaches.

#### 1947 through 1972

The Armed Services Procurement Act of 1947 addressed the problem of insuring that procurements were properly formulated and issued by requiring that the government consent to the placement of subcontracts. This literally required government personnel to review each purchasing action to determine that action's necessity and adequacy. In the period prior to the Korean Conflict this approach was acceptable. However, when the increased demands for materiel erupted as a result of the conflict, it quickly became apparent that a more workable approach was needed.

Consequently, in 1950, the Air Force took the lead in the Air Materiel Command by establishing the Purchasing System Survey Program. This approach was built on the premise that a properly structured and comprehensive purchasing system will result in individual purchasing actions that are satisfactory, i.e, if the system for arranging procurement is correct, then that which flows through and results from that system will be correct. The approach was to focus our limited resources on improving the system rather

than attempting to review each procurement action for adequacy. In 1961 this approach was adopted DOD wide through the establishment of the Contractor Procurement System Review (CPSR). The CPSR entailed an annual review of the contractor's procurement system by a team of government procurement specialists to determine if the system was acceptable. This approach is used by the Army, Navy and Defense Logistics Agency today.

The approach of focusing on the system versus the individual purchasing action resulted in a number of improvements in the contractor's management of subcontracts. The contractors markedly improved their documented purchasing system procedures, thus enabling their buying personnel to have ready access to instructions that detailed the correct methods for conducting procurement. As a result, the number of buyer originated discrepancies was reduced. By applying a single set of evaluation criteria to the various defense contractors a certain standardization of their systems emerged, which resulted in more equitable treatment of subcontractors by defense prime contractors. Perhaps the most significant benefit was the realization of improved efficiency. By eliminating the government review element, procurements were placed faster and substantial government review man years were eliminated.

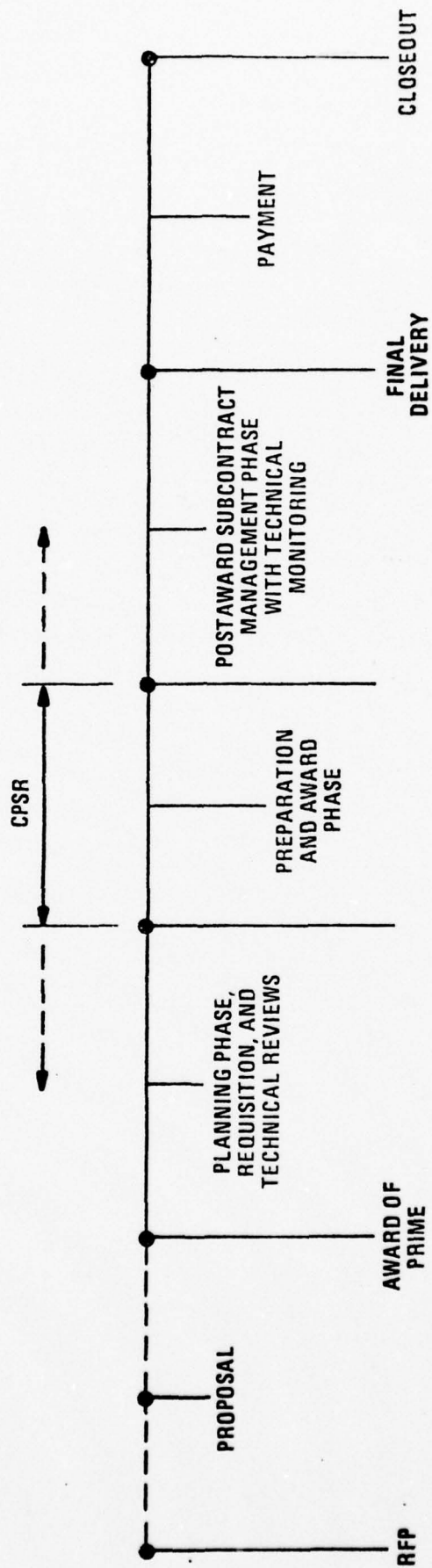
While shifting to the system auditing approach resulted in improvements of the contractor's management of procurement, it was not without its problems. The CPSR was not prevention oriented. Its primary thrust was in the preparation of purchasing documents and the mechanics of awarding procurements. The CPSR team assessed the acceptability of these areas

through reviewing the contractor's procedures for adequacy, and through sampling copies of the purchase orders and subcontracts that had been awarded. The team did not address the prepurchasing actions that are necessary for proper procurement formulation, nor did it address the post-award management tasks that are necessary to insure that the materiel is acquired on time, within cost, and that it has the desired performance characteristics (see figure 1). In addition, the CPSR approach was an annual event which resulted in a flurry of activity by the contractor to insure the records were proper, with a corresponding relaxation of attention once the review was complete and system approval granted.

As these deficiencies were realized, the Air Force took steps to eliminate them. In an attempt to maintain contractor management attention on the procurement system a full time resident Procurement Methods Analyst (PMA) was assigned to the Air Force Plant Representative Offices (AFPROs). The PMA's charter was to provide a continuous assessment of the contractor's purchasing system, surfacing problems to the contractor for corrective action when they were detected. The inadequate coverage of pre-purchasing and post-award management by the CPSR team was addressed by adding functional specialist augmentees (Quality Assurance, Manufacturing, Engineering, etc) to the team. The Air Force realized that the functional areas were intimately involved in the structuring and subsequent management of subcontracts. In an effort to efficiently apply resources follow-on



# SUBCONTRACT MANAGEMENT LIFE CYCLE



--- TO PRIME CONTRACT AWARD  
 — SUBCONTRACT LIFE SPAN

Figure 1

reviews (versus an initial assessment of system adequacy) emphasized problem area examination instead of attempting to review the entire system. Theoretically, the PMA's efforts would have maintained visibility into the entire system, hence, the efforts of the CPSR team could be directed toward the improvement of problem areas.

#### 1972 through Establishment of AFCMD Subcontract Management Function

The previously described actions resulted in some improvement of the contractor's management of his material acquisitions. Despite improvements analysis of cost overruns and schedule delays that characterized weapon systems being acquired in the late 1960s and early 1970s revealed that inadequate control and management of subcontractors was a cause of many of the problems. A growing awareness of this situation prompted increased government attention to the area of subcontract management in the early part of the 1970s.

In January of 1972 the Air Force Systems Command concluded a study of subcontractor support in the acquisition of major weapon systems which included the following conclusions:

1. Current DOD acquisition policy has had little impact on the prime/subcontractor relationship.
2. Better surveillance of technical flowdown is needed.
3. Prime contractors are given little guidance by the Air Force on the management of subcontractors.

4. Prime contractor's emphasis on subcontract management varies.
5. ASPR discourages AF surveillance of the prime/subcontractor relationship.
6. AF surveillance promotes more effective management of subcontractors. (3)

The above conclusions resulted in an AFSC policy letter being issued in April of 1972 covering ten areas associated with subcontracting that were aimed at the buying activities as well as the contract administration offices:

1. Maintain surveillance of critical subcontract performance using most functional specialties, integrated for productivity.
2. Maintain visibility on the flowdown of technical requirements, particularly reliability and maintainability, to avoid unwarranted costs.
3. Encourage solicitation of subcontractor risk analyses, alternate technical proposals and use of off the shelf hardware to achieve practical tradeoffs.
4. Establish reporting requirements on subcontract performance.
5. Attend appropriate meetings concerning subcontractor performance.
6. Use contractual make or buy plans.
7. In source selection, consider contractor's past success in managing subcontracts.
8. Identify critical subcontracts for special management emphasis

9. Contractually define the prime's subcontract management responsibility and government surveillance rights.
10. Review selection of critical subcontractors and emphasize conformity with DODD 5000.1. (4)

As a result of the AFSC study and policy letter, the Air Force Contract Management Division (AFCMD) decided to review its contribution to subcontract management. A study was completed on 1 June 1973, which contained the following conclusions and recommendations:

1. Responsibility for influencing the prime contractor toward better subcontract management is fragmented among the AFPRO functional divisions.
2. Adequate evaluation of a contractor's procurement system is beyond the capabilities of one man, i.e., the PMA, due to skill and time restrictions.
3. Therefore, a multifunctional division level organization is needed to assure the contractor's procurement system is kept acceptable; that specific tasks are performed in direct support of the buying agencies, and that the socioeconomic programs mandated by congress are properly implemented. (2)

In response to this study, General Nunn, Commander of AFCMD, authorized the establishment of a subcontract management function within AFCMD. In the latter part of 1973 and during most of 1974, a Directorate of Subcontract Management was established at Headquarters level and Divisions were established at each of the AFPROs.



### SECTION III

#### ORGANIZATION

##### Focus on AFPRO Level

The remainder of this report will focus on the Subcontract Management (SM) function as it exists at the AFPRO level. While the Directorate at headquarters level provides policy guidance and assistance to the field, it is the SM function within the AFPRO that provides the services that are of direct use to the buying agency.

##### Division Organization

The preferred organizational arrangement for assembling the personnel resources necessary to perform the SM functions is through the establishment of a self sufficient division. The division, typically, is composed of following functional specialists:

- Division Chief (O-4/GS-13)
- Contract Specialist
- Systems Engineer
- Industrial Engineer
- Quality Assurance Specialist
- Small Business Specialist
- Secretarial/Clerical

##### Assistant for Subcontract Management

In those AFPROs where the subcontract management workload is not substantial due to the existence of, for example, only one procurement system, or a low volume of major/critical subcontracts, or low buying agency support requirements, etc, the personnel resources are organized

through a matrix type of arrangement. An Assistant for Subcontract Management (ASM) reporting directly to the Air Force Plant Representative (AFPR) is appointed. This individual may be military (O-3/4) or civilian (GS-12/13) and will carry the authority of a Division Chief. An assistant to the ASM will be designated, as well as clerical support. The functional support will be obtained through formal designation of functional specialists, by name, on a part time basis, or by formal arrangement with the functional divisions. The ASM is responsible to manage the efforts of the functional specialists who are made available to him. (5:2-1)

## SECTION IV

### RESPONSIBILITIES

#### Two Major Tasks that are Complimentary

Regardless of the organizational arrangement employed, the responsibilities of the SM function remain the same. The buying activity can expect the same quality of support from either mode. This section will examine the responsibilities of the SM function in terms of the services it will provide to the buying activity. To aid in the explanation of these services, they will be grouped into two major categories -- determination of the adequacy of the contractor's procurement system and performance of specific tasks in direct support of the buying activity. Although these responsibilities will be addressed separately, it must be emphasized that they are complimentary. Conducting the evaluation and surveillance that is necessary to ascertain the health of the contractor's procurement system surfaces and encourages correction of problems that have or may have an impact on the contractor's ability to satisfactorily perform the program. Conversely, performing specific tasks in support of the buying activity will provide insight into the adequacy of the contractor's procurement system and aid in its evaluation.

#### Procurement System Evaluation

The first major responsibility area to be addressed is the means by which the SM function determines the adequacy and encourages the

improvement of the contractor's procurement system. Recall in the discussion of the evolution of the SM function that at the beginning of the Korean Conflict the government approach to assuring proper subcontracting shifted from purchase order review to procurement system audit. Section 23 of ASPR requires that a review shall be made of a contractor's procurement system when he is expected to have sales to the government in excess of \$5,000,000 during the next 12 months on other than firm fixed price contracts and fixed price contracts with economic price adjustment provisions. If the review determines that the contractor's procurement policies and practices are efficient and provide adequate protection of the government's interests, the Principal Administrative Contracting Officer (PACO) for that contractor will grant approval of the procurement system. If the contractor's procurement system has approval, then the contractor is not required to provide the government with advance notification of his intent to subcontract and gain consent of the PACO prior to his placement of the subcontract in the majority of his procurement actions. (See ASPR 23, Part 2, and ASPR Clauses 7-104.23, 7-203.8, and 7-402.8 for detailed requirements and restrictions associated with placing subcontracts under an unapproved system). For our purposes, let us say that an approved procurement system allows the contractor to operate independent of direct government involvement in the majority of cases, and thus enables the whole subcontracting effort to operate more efficiently. In addition, if a contractor's procurement system is sufficiently adequate to satisfy the government review criteria, there probably will be less



subcontracting problems occurring due to system deficiencies. Thus, from the standpoint of better efficiency and fewer problems, it is in the buying agencies' interest to deal with a prime contractor who has an approved procurement system.

Utilization of the Contractor Management System Evaluation Program (CMSEP)\*

The defense contractors who meet the criteria of ASPR 23 and are under Air Force cognizance have their procurement systems reviewed by the SM function versus an annual visit by a team conducting a CPSR. The SM function employs an evaluation approach that is part of the AFCMD Contractor Management System Evaluation Program (CMSEP). The CMSEP method of assessing the acceptability of the contractor's procurement system differs from the CPSR approach in the following ways.

First, the CMSEP approach is much broader than the CPSR. CMSEP evaluates the contractor's management of the procurement process from the time that the Request for Proposal for the prime contract is issued through the eventual closeout of the subcontracts that were required. The CPSR concentrates primarily on the preparation and award of subcontracts. CMSEP evaluates the acceptability of the subsystems that are operated by the other functional areas that are critical to the procurement process; e.g, the quality assurance vendor rating system, the engineering design reviews, the make or buy decision system, etc. The CPSR confines itself to traditional procurement responsibilities.

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\*The mechanics of how CMSEP works can be found in AFCMDR 178-1, "Contractor Management System Evaluation Program". (6)

Second, the CMSEP approach is a continuous evaluation versus an annual visit by a CPSR team. The SM function conducts periodic reviews of the key elements of the contractor's procurement system throughout the year. The periodic reviews are supplemented by the knowledge that the SM personnel gain of the contractor's procurement system when they are performing tasks in direct support of the buying agency. This knowledge is combined with the results of the periodic reviews to form the basis for recommending approval or withholding of approval of the procurement system by the PACO.

Third, as a result of the continuous evaluation, when deficiencies are found in the procurement system, they are reported and corrected in a timely fashion (before they get out of hand). CMSEP employs a formal reporting system which works on the exception basis. The reporting is done monthly, with copies of the reports going to the contractor, the buying agency whose program is impacted by the deficiency, and AFCMD Headquarters. The report distinguishes between those problems which would immediately and significantly impact the program and those of lesser intensity. The reporting system keeps track of deficiencies until they are corrected by the contractor. The CPSR approach provides an annual summary of the condition of the contractor's procurement system.

The last difference that warrants mention is that the CMSE Program encourages the contractor to conduct an internal management audit program. One of the elements evaluated in each functional area concerns the existence and adequacy of the self evaluation program. The contractor's

overall management system is considered lacking if he does not review his own management systems in each of the functional areas. The CPSR approach does not consider self evaluation by the contractor.

#### Areas Evaluated

The CMSE Program addresses five major areas in its evaluation of the contractor's procurement system.

The first area of concern deals with the acquisition management subsystem of the contractor's procurement system. The primary concern in this area is to insure that the contractor's executive management has an appreciation of the importance of procurement in the achievement of satisfactory prime contract performance. Concerns also center on whether the subsystem provides for executive awareness, prevention and correction of deficiencies in the material acquisition system, and whether the system provides for prompt decisions on procurement matters at all appropriate levels of authority.

The second area of concern addresses the acquisition planning subsystem. This area is addressed in recognition of the fact that adequate planning is one of the most important factors contributing to a successful procurement. Evaluation of this area includes reviewing elements related to engineering design, design reviews, drawings and specifications, procurement input to prime proposals, and the make or buy process. In addition, the vendor rating system and case histories, the second source program, the identification of critical subcontracts, quantification of requirements and purchase request processing are examined.

The third subsystem that is evaluated is the system utilized to process the purchase. The purchasing process embraces source selection, pre-award surveys, compliance with PL 87-653 ("Truth in Negotiations"), pricing and negotiation. It also addresses the process of assessing risk for the selection of the subcontract type, and drafting and issuing the Invitation for Bid and the purchase instrument.

The post-award subcontract management subsystem is the fourth area considered. This area focuses on the adequacy of the prime contractor's support, direction, and the timely action that is necessary to successfully culminate a subcontract. Reports, formal meetings and visits to subcontractor facilities, evaluation of reports, problem identification and solving, and the processing of subcontract changes are factors that are reviewed.

The fifth and last subsystem reviewed is concerned with the prime contractor's implementation of the socioeconomic programs that are mandated by Congress. Generally, all contracts that exceed \$10,000 include at least one clause pertaining to Small Business, Labor Surplus Area concerns and Minority Business Enterprises. In prime contracts expected to exceed \$500,000, clauses are included that require the prime contractor to assume an affirmative action obligation in these areas. The SM function evaluates the system the contractor employs to assure compliance with these requirements.



Within the five subsystems of the contractor's procurement system there are 47 elements that are addressed by the CMSEP approach. It is beyond the scope of this report to examine each of these elements in detail, however, a listing of them is provided in the form of Appendix A.

#### Some Results Achieved

In the preceding paragraphs the process that the AFPRO/SM function uses to determine the adequacy of and encourage the improvement of the contractor's procurement system has been reviewed. Before moving on to a discussion of the other services that the SM function can provide to the buying agency, it is appropriate to review a few of the results that have occurred from the application of the CMSEP approach to a contractor's procurement system. In the initial application of the CMSEP method to a contractor's procurement system that had previously been considered acceptable under the CPSR system, the following deficiencies were found and subsequently remedied. These are just a few of the problems that were encountered and are presented for illustrative purposes.

1. The contractor did not have an internal audit program. Consequently, his procedural guidance was out of date, and as a result, buying personnel were operating with widely divergent approaches to similar situations.
2. The contractor did not have a formal training program established for newly hired buying personnel, nor did he have a program designed to keep his current personnel up-to-date. This contributed to the divergent approaches to the buying tasks.

3. There was no system established to assure that subcontractors conformed to the reliability, maintainability and systems safety requirements that were mandatory flow down requirements from the prime contract.
4. The contractor had no system established to assure that subcontracts were definitized in a timely manner. One subcontract for a complex high value component was found to be 18 months old with the work 85% complete and four months behind schedule without being definitized.
5. The contractor had no system to insure that the right functional people reviewed subcontractor's change requests prior to approval being granted.
6. The contractor had no method to control the inclusion of non-standard parts in subcontracted components. This element was not addressed in the design reviews conducted on complex components.

From the above it can be seen that the AFPRO/SM function can provide an invaluable service to the buying agency by inducing the contractor to maintain an acceptable procurement system. By encouraging the contractor to conduct his own internal audit, and through continuous surveillance, problems can be detected, reported and corrected before they have a negative impact on government acquisition programs.

#### Direct Support Responsibilities\*

As mentioned before, there are two major categories of services that the SM function provides. The first category discussed dealt with

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\*See AFCMDR 70-24, "Subcontract Management Program" for detailed coverage of this area.

assessing the health of the contractor's procurement system. The second category will address those services that the SM function will perform to more directly support the buying activity. Perhaps the best way to review these services is to examine them in terms of when they occur in the subcontract procurement life cycle. The services to be performed can be broken into three time phases, i.e, those that will be performed prior to the signing of the prime contract, those that will be performed prior to the contractor's placement of subcontracts, and those that deal with post-award subcontract management.

Those services that the SM function will provide prior to the signing of the prime contract are oriented toward assisting the buying activity in assessing the efforts that the prime contractor has made to understand the program subcontracting challenges and risks. To this end the SM function will:

1. Review the make or buy decisions that the contractor has included in the proposal. The SM function will verify the backup data for the buy decisions and work with the AFPRO Manufacturing Operations Division to determine if the distribution of components between make and buy is appropriate.
2. Assist in the evaluation of the subcontract management plan. The SM function will review the plan to assure conformance with the requirements of the Request for Proposal. It will also verify that the listing of major/critical subcontracts is comprehensive.

3. Verify the cost or pricing data that the prime contractor attributes to the sub-contractors. The SM function will accomplish this by reviewing the files the contractor maintains that contain the quotes obtained from potential sources. The number of sources solicited can be determined at the same time.

Once the prime contract is signed, the SM function can aid the buying activity by providing insight into the adequacy of the contractor's efforts to place subcontracts. The SM function can also aid the contractor in overcoming certain problems that may be encountered in the placement of sub-contracts. The services that will be provided include:

1. Accompanying the prime contractor during the performance of Pre-Award Surveys, Should Cost Reviews or Production Readiness Reviews of subcontractors. This accompaniment has a dual benefit in that it enables the government to verify the adequacy of the prime's review, as well as provides emphasis to the subcontractor that the government considers the particular subcontract to be crucial to the success of the program.
2. Maintaining an awareness of any critical material shortages and/or extended lead times of critical material being procured by the prime contractor. When the shortages or extended lead times have an impact on the program, the SM function will relay impact data as is appropriate to the buying agency.
3. Assisting the prime contractor with initiating and processing the appropriate documents, when utilization of the Defense Priority System will help alleviate material shortages or delays. Aid will be provided in requesting material priority assistance, changes in priority, duty free entry or other waivers which aid in reducing delays in obtaining necessary materials.



4. Perform the necessary review and evaluation and recommend approval or disapproval to the Administrative Contracting Officer (ACO) on those contracts that still require advance notification of intent to issue subcontracts and the corresponding granting of consent. (See the earlier discussion of this topic in the "Responsibilities" section).

The procurement job is not complete when the subcontract is signed. Follow-up and management of the acquisition of the subcontracted material is necessary, for invariably, there will be difficulties encountered by the subcontractor in fulfilling the terms of the agreement. The SM function can provide the following services to insure that this post-award management is properly executed. The SM function will:

1. Coordinate the review of those subcontracts designated as major and critical by the ACO for the necessity of establishing government surveillance of the work performed at the subcontractor's facility. On those subcontracts where it is determined that government surveillance is appropriate, communication will be made with the buying agency to effect a joint decision to proceed with the establishment of surveillance. When the decision has been made to effect surveillance, the SM function will execute the direction to and coordination with the cognizant Contract Administration Office. It should be pointed out that the SM function becomes involved in this activity only when there is need for surveillance other than, or in addition to, Quality Assurance and/or Government Property. When the surveillance is confined to Quality Assurance and/or Property, the effecting of that surveillance is independent of the SM function. It should also be pointed out that this process begins within 30 days after the signing of the prime contract, however, the effecting of the surveillance at the subcontractor's facility will not be done until the subcontract is issued. (See AFCDMDR 70-16, "Supporting Contract Administration", for more detail on this area).

2. Advise the buying agency of subcontract problems or potential problems such as strikes, labor disputes, material shortages, etc, which could adversely impact the program. The SM function will monitor the prime contractor's development of solutions and maintain the flow of status information to the buying agency until resolution. While this service is discussed under post-award activities, it must be emphasized that the SM function will provide this service during any phase of the procurement cycle.
3. Review and verify the accuracy of major/critical subcontract status reports that are identified in the Contract Data Requirements List or that have been requested by the AFPRO or buying agency.
4. Attend program management reviews or other meetings associated with subcontract management activities when requested by the buying activity, or as necessary to carry out the requirements of other related tasks.
5. Assist the AFPRO Selected Acquisition Information Management System (SAIMS) Monitor with the surveillance of that aspect of the Cost/Schedule Control System Criteria (C/SCSC) reporting that is related to subcontractor performance.
6. Review and monitor the contractor's intra-company transactions/inter-divisional work authorizations (IDWAs) to insure proper management. The SM function will advise the buying agency of problems in this area that would have an adverse impact on the program.
7. Maintain surveillance of the prime contractor's implementation of contractually required socio-economic programs that are related to subcontracting.

While the previous enumeration of tasks that the SM function will perform in support of the buying agency are fairly comprehensive, it is recognized that they are not all inclusive. The basic philosophy behind the SM function is that its primary purpose is to be of service to the buying agency. Consequently, the AFPRO SM function will perform any service or task related to subcontract management that the buying agency requires to be accomplished that is within its capability.

## SECTION V

### THE FUTURE

#### A Permanent Part of the AFCMD Organization

The SM function has gone through several phases since its inception in 1974. The original charter directed that it focus solely on the evaluation of the contractor's procurement system. As time progressed, it became apparent that the SM function could provide valuable services in direct support of the buying agency, and efforts were expended toward defining an appropriate role. In late 1975, in the face of declining personnel resources, a review of the SM concept was conducted by AFCMD Headquarters to determine if the results being achieved were worth the resources being expended. In this review the buying agencies were consulted to ascertain the worth of the services being provided, and the response was very favorable. Based on this consultation and other analyses, it was decided to continue the SM function and to strengthen it.

During a recent visit to the Defense Systems Management College, General Merton W. Baker, AFCMD Commander, was asked to comment on the future of the SM function. His reply was as follows:

The Subcontract Management function will continue to be a viable organization. There was a question a couple of years ago as to whether to continue the concept. I queried the buying activities to determine their perception of the effort we were putting forth and they indicated that it (the SM function) was a valuable system. We are monitoring all of the major and critical subcontracts in addition to keeping tabs on the whole subcontract structure. If problems



crop up we tweak the sub through the prime. We've been working very closely with the SPOs in these matters. As I said before, the subcontract management effort will continue to be a viable part of the CMD (AFCMD) organization. (7)

#### Recent Efforts

In its efforts to improve and strengthen the services provided, the Directorate of Subcontract Management has recently revised and reissued the basic guidance governing the SM function, AFCMDR 70-24, "Subcontract Management Program". The essence of that guidance has been discussed in the previous parts of this report. Among other activities the Directorate is currently involved in two improvement efforts that will be directly beneficial to buying activities. The surveillance of intra-company transactions mentioned earlier is in the fledgling stage, and work is being done to better define and structure the activity in this area.

The Directorate is also engaged in the development of an AFCMD wide vendor feedback system. A master listing, segregated by vendor, of all the major and critical subcontracts that are issued in support of major government prime contracts that are under surveillance of AFCMD will be maintained at the headquarters. If one of the listed subcontracts experiences problems, the cognizant SM function, in addition to communicating with the buying activity, will telephonically advise the SM Directorate. The Directorate will determine if the vendor of that particular subcontract is responsible for other major/critical subcontracts on other prime contracts under AFCMD cognizance. If there are other prime contracts

that could be impacted, the cognizant SM function will be advised and will, in turn, perform a close review of the appropriate subcontracts to ascertain if potential problems exist. It is envisioned that this mechanism will aid in the early surfacing of major/critical subcontract problems and thus enable corrective action to be effected before significant difficulties result. (8)

## SECTION VI

### CONCLUSION

#### A Short Summary

The previous sections have reviewed the evolution, organization, responsibilities and future of the Subcontract Management function as operated by the Air Force Contract Management Division. This review has revealed that the AFPRO/SM function has made significant gains toward overcoming the shortcomings of the traditional approach of government subcontract management. Under the AFCMD approach, the contractor's procurement system is subject to a continuous review that encompasses a multi-functional evaluation of the procurement process from the time that the Request for Proposal (RFP) for the prime contract is issued until the subcontract is eventually closed out. (See Figure 2). In addition, the SM function performs a variety of services in direct support of the buying agency that span the procurement life cycle. Thus, it can be seen that a valuable asset is available to the buying agencies to aid in the management of their programs.

#### Recommendations for Utilizing the SM Function

In concluding this report I wish to leave those readers who are members of program offices and buying agencies with a recommendation: utilize the services of the Subcontract Management function. In order

# SUBCONTRACT MANAGEMENT LIFE CYCLE

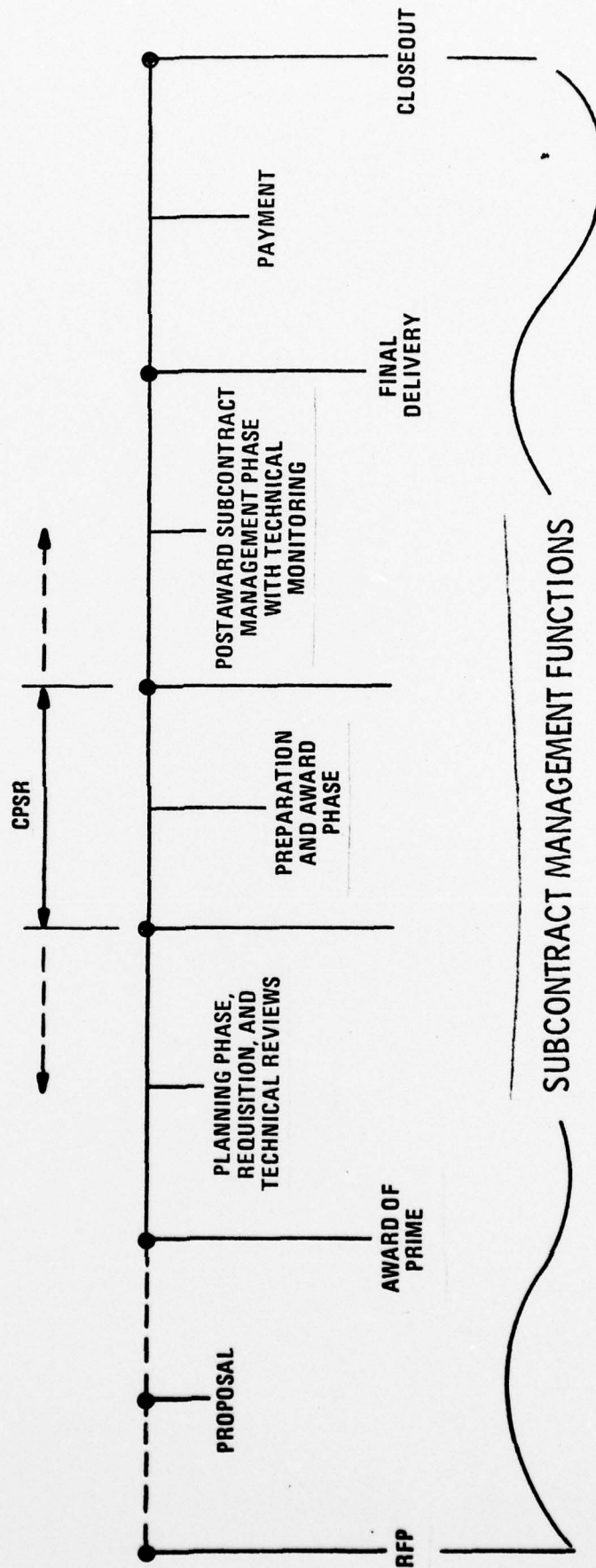


Figure 2



to take advantage of these services I suggest you take the following steps:

1. Talk to the AFPRO early in your program. Involve the SM personnel from the beginning. They will have insights into the contractor's operation that will be valuable in shaping your plans and requirements.
2. Communicate your needs. If the SM function knows what is required it will enable their resources to be optimally focused.
3. Formalize the support. Put the support agreements in writing in the Memorandum of Agreement that should exist between the buying agency and the AFPRO. Reducing the agreements to writing will help alleviate future misunderstandings.
4. Encourage informal communications. "How goes it" phone conversations on a daily basis are the best means of keeping tabs on program progress.
5. If you get a weak response from the SM function, talk to the Air Force Plant Representative. If that fails, talk to the Directorate at AFCMD Headquarters. AFCMD is interested in providing the best support possible.

## APPENDIX A

### ELEMENTS ADDRESSED BY PROCUREMENT SYSTEM EVALUATION (Reference AFCMDR 178-1)

#### 1. Acquisition Management:

- a. Are the company procurement policies current, in written form, and understandable to all functions participating in acquisition management?
- b. Are the assigned responsibilities and authorities of functions such as procurement, engineering, manufacturing and quality assurance departments in the pre-purchasing, purchasing and post-award management of the subcontract phases of materiel and services acquisition clearly defined and complete?
- c. Is the purchasing and/or subcontract management organization adequately structured and staffed?
- d. Are the contractor's internal audit procedures and practices designed to identify acquisition management system deficiencies and is there a requirement for prompt corrective action?
- e. Do the procurement organization documented procedures clearly define the method for a meaningful flow of information within the procurement organization and between top management, procurement and other functional organizations?

#### 2. Acquisition Planning - Is the contractor complying with documentation that provides:

- a. For purchasing to furnish the estimating organization copies of current supplier quotes and negotiated price data in a timely manner for use in prime contract proposal preparation?
- b. For appropriate review of designs, drawings, and specifications of subcontracted items including hardware, computer software, technical data and services by functional disciplines?
- c. For a make-or-buy program which includes an assessment of both subcontract and in-house engineering, manufacturing, quality assurance capabilities, as well as cost consideration?
- d. For means of developing and soliciting potential subcontractors?

e. For acceptable criteria governing the establishment of a formal source selection program?

f. For establishing subcontractor reporting requirements that are realistic and effective for post-award management? (Including prime contract schedule compatibility, design reviews and performance milestones)?

g. For identification of high-risk subsystems, components, and items to be subcontracted?

h. For input from all functions to the Vendor Rating System and Vendor Case Histories?

i. For a method of assuring that the subcontractor quality system will be in compliance with the prime contractor's quality assurance program requirements?

j. For timely preparation, appropriate review, approval, and transmission of an accurate and complete technical data package and/or purchase requisition?

3. Processing the Purchase - Is the contractor complying with documentation that provides:

a. For current and comprehensive procurement instruction for the preparation, processing and issuance of purchase orders?

b. For a method of assuring that procurement personnel are complying with applicable Government regulations, public laws, etc, and/or restrictions?

c. For a review of requisitions for the same or similar items for all contractor requirements (Government and commercial) for consolidation to effect maximum economy including the screening of available stocks and surpluses?

d. That purchasing documents include prime contractor and/or Government source inspection requirements when appropriate?

e. For a system to insure satisfactory flowdown of applicable prime contract terms and conditions for incorporation into the procurement document?

f. For a system to control the issuance of intra-company transactions?

- g. For adequate written justification of single/sole source procurements?
- h. For cost effective methods for processing the high volume of low dollar value orders and calls against blanket orders and open-end sub-contracts?
- i. For adequate pre-award surveys by applicable functional disciplines of all appropriate procurements?
- j. For types of subcontracts selected to be justified on the basis of technical or other risk assessment when appropriate?
- k. For adequate cost or price analysis?
  - l. That buyers will establish negotiation objectives, which include audit, technical and pricing recommendations and document differences between negotiation objectives and settlement?
  - m. That the procurement documents are reviewed by appropriate technical and support functions before final approval by purchasing?
  - n. That procurement documents be properly and promptly reviewed and approved by appropriate procurement personnel before being awarded?
- 4. Post-Award Subcontract Management - Is the contractor complying with documentation that provides:
  - a. That unpriced procurement and changes will be definitized in a timely manner?
  - b. That cost reimbursement, time and material, and labor-hour sub-contracts will be properly controlled?
  - c. For the contractor to assure that subcontractors maintain current files of documents essential to subcontract performance?
  - d. For adequate visibility of the subcontractor and/or IDWA in the areas of cost, schedule and performance?
  - e. Require that performance be verified before disbursing progress payments?
  - f. For Subcontractors to identify and record nonconformances, determine cause of defects, implement adequate timely corrective actions, and for appropriate notification?



g. For a method of review to determine if change control at subcontractors provides for changes to configuration items which are clearly traceable, accurately reported and properly reviewed by responsible functions?

h. That the use of nonstandard parts and components by subcontractors be controlled by the prime contractor?

i. That the prime contractor require subcontractors to maintain complete and effective control of registered components and qualified products?

j. For verification of subcontractor's control of calibration, measuring, and test equipment, and production tooling used as a media of inspection?

k. For exercise of controls over the acquisition of special tools and special test equipment by subcontractors?

l. For visibility and verification of subcontractor's compliance to his approved quality/inspection system and/or engineering test program as appropriate?

m. That prompt payment discounts will be obtained from subcontractors?

n. For a method to review that there is adequate source inspection to assure effective and economical evaluation of the product quality?

o. For special priorities assistance to be processed through the prime contractor when requested by the subcontractor?

5. Socioeconomic Programs - Is the contractor complying with procedures that provide:

a. For an effective system for complying with the Small Business Subcontracting Program contract clause?

b. For an effective system for complying with the Labor Surplus Area Subcontracting Program contract clause?

c. For an effective system for complying with the Minority Business Enterprises Subcontracting Program contract clause?

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